UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT
Office of Fire and Aviation
3833 South Development Avenue
Boise, Idaho 83705

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To: State Directors

From: Director, Office of Fire and Aviation

Subject: Fuel Moisture Situation with 10-hour Fuels

Since the inception of IAMS, and now with the BLM weather and lightning website, the BLM has calculated and displayed 1- and 10-hr fuel moisture values. These values are based on an experimental algorithm developed by John Deeming which uses the weather observations of temperature, relative humidity, and precipitation amount and fuel temperature from Remote Automated Weather Stations (RAWS).

Currently, when 1- and 10-hr fuel moistures are calculated for the National Fire Danger Rating System (as in both the Weather Information Management System and PC software applications such as Firefamily Plus) the output is based on the same weather observations above and a human entry for "State of the Weather."

These two calculations of fuel moisture are likely to provide different results, but not to the magnitude that has been experienced [such as BLM website: 1hr = 6.2, 10hr = 24.6; WIMS: 1hr = 2, 10hr = 3]. In the interest of firefighter safety, we have discontinued display of the fuel moisture values until the difference can be resolved and corrected. Then, if possible, we will display the corrected calculated values again.

Recent developments in the evolution of the "Next Generation" fire danger rating system provide us the opportunity to move forward from this situation. Solar radiation has been identified as the appropriate replacement of human entered "State of the Weather" for hourly calculation of fuel moisture (and, subsequently, fire danger indices). For this reason, BLM recently installed solar

radiation sensors on all of its RAWS. The new algorithm for 10-hr fuel moisture is developed and ready for experimental use and validation against other measures. We plan to display these new 1- and 10-hr values as soon as possible.

If you have any questions or comments, please call Paul Schlobohm at 208-387-5444.

Signed by:
Ron Dunton
Acting Director, Office of Fire and Aviation

Authenticated by:
Pat Lewis
Supervisory Mgmt. Asst.